Syllabus

TITLE: Mobile App Development for Entrepreneurs

CSE 441winter2022
Section 1: MW: 3:00-4:30, 1311 EECS, Discussion – F: 10:30-11:30, 2153 GGBL
Section 2: MW: 4:30-6:00, 1311 EECS, Discussion – F: 11:30-12:30, 2153 GGBL

Students will engage in the hands-on practice of entrepreneurship by actually inventing, building, testing, and marketing their own "mobile" apps.

- **A "mobile" app may now mean: a Chrome extension, a web app, a native iOS/Android app, an Alexa Skill, etc., etc., etc. BE IMAGINATIVE!**

What will be discussed in class: Best practices in the software engineering of "mobile" applications and best practices of software entrepreneurs in the design, production and marketing of "mobile" apps.

- **Instructor: Elliot Soloway, soloway441@gmail.com　　YOU MUST USE THAT EMAIL!**
- **IA for section 1: Aman Jalan ajalan@umich.edu**
- **IA for section 2: Saumit Kukkadapu saumit@umich.edu**

> ### PLEASE: read the course description (see above)
> ### PLEASE: note the FULL title of the course (see above)
> **Why? I am NOT going to TEACH you how to program; this is a course as much (if not more!) about entrepreneurship as it is about coding up apps. If you want MORE focus on technology – and that's absolutely a fair desire – then please, drop this course and take something else.**
> **I don't want you to be disappointed.**
> **I want to make sure your expectations and the course activities are aligned!**

Class Wiki:
https://tinyurl.com/441winter2021ClassWiki
For this class, instead of using Canvas, we will use a wiki – the same wiki I have used since Winter 2009.
Videos of Class
- Section 1 - https://tinyurl.com/441winter2022sect1VideoClass
- Section 2 - https://tinyurl.com/441winter2022sect2VideoClass

Piazza:
- Section 1 – https://piazza.com/class/kt1vml4g5m16zw
- Section 2 - https://piazza.com/class/kt1rnxpsepp5my

Google Folder:
Section 1: https://tinyurl.com/441winter2022Section001
Section 2: https://tinyurl.com/441winter2022Section002
Email Lists:
- Section 1: 441winter2022section1@umich.edu
- Section 2: 441winter2022section2@umich.edu
- Both Sections 441winter2022BothSections@umich.edu

- ## **Attendance Policy:**
- Attendance is required. If you are ill or have a legitimate reason for missing class (e.g., Job interview), please fill out the [absence form](#) on the wiki.

CLASS RULES:

Class Rule 0: Size of the Team

Teams will be made up of 3 individuals. A 2 person team is not allowed. A 4-person team is possible – but an argument must be made as to why 4 people are needed for that project. Members of a team must be from the same section. No exceptions. See Rule 8. Teams present together in their section. Typically, time during class will be given to teams to prepare for team presentations.

Class Rule 1: **The email correspondence from this class will use the lists specified above. You are responsible for knowing what's been sent out to the email list for your section:**

IMPORANT NOTE: YOU can use those email addresses to send messages to your section. I encourage you to send out articles you feel your colleagues will enjoy!

Class Rule 2: When you send me an email with a question, you MUST cc your team.

I won't answer your question if your team isn't included.

Think about why I have instituted this rule…

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<u>Class Rule 3:</u> In any email to me, ALWAYS tell me what section you are in – or I won't respond.

<u>Class Rule 4:</u> Every team will create an email address for the team; an email sent to the team's email address will go to all members of the team. (You can use mcommunity.umich.edu)

<u>Class Rule 5:</u> Every team will post their project info at the appropriate URL – see above. Go to that URL, click "edit" and it will say you need to request permission to edit – so, do request it. You will be granted permission within 24 hours. Probably.

<u>Class Rule 6</u>: Create a page for your group/app on the [wiki](#). Link that page to the info in "Group Pages"

<u>Class Rule 7:</u> Post your teams' slides on the [wiki](#) within 24 hours of your presentation.

<u>Class Rule 8:</u>
Attendance in 441winter2022 is mandatory. That said… I feel that in 441 students that are seniors are pre-professionals - while college freshmen are post-high-schoolers. But, I don't feel that I need to be a policeman checking up on you. And, some of the work of the class is done during the class. For example, during class, you and your team will be making five presentations over the course of the semester. Not presenting with your team would be a serious problem. And, each student will be making a presentation (an analysis of a company) during class. And, each student will be completing a peer review of all the other in-class presentations. Also, a significant portion (perhaps up to 1/3) of each class period is devoted to discussing current events. And, about 1/3 of each class is spent discussing the reading for that class period. Simply put, 441 is not a "lecture" class where watching the lecture is the main learning strategy. Rather, 441 is a participatory class -- since I believe that "learning is in the conversation" and thus to participate in the conversation, attendance at the conversation is pretty important.

- If you are not in class due to a job interview (or related job issue), then missing those peer reviews will NOT count against you – but you MUST fill out an "Request Absence" form… see below
- Also: if you miss a team preso due to a job interview, so be it. Your team can cover for you - assuming your team agrees.
- There is a form on the <u>class wiki</u> called "Request Absence" – please fill this form out with 24 hours of your absence.
- I can't be penalizing you for being professionals! Going on JOB interviews takes precedence, at least in my mind. And I wish you all the best of luck on those interviews!
- You are allowed 3 unexcused absences. For each unexcused absence after 3, the attendance grade will be reduced by a half-letter grade.

<u>Class Rule 9</u>:
RULES about ALL presentations (Company & Project):
1. **You will share your screen on Zoom.**
2. ******Send your PDF presentation to soloway441fall2020@umich.edu ******
3. **As directed by Class Rules 5, 6, 7 you must upload all your presentations (App, Company, Initial design, etc.) to the class wiki.**
4. **You must upload your preso within 24 hours of your presentation. When your presentation is posted, then your grade gets entered.**

Activities that will make up your final grade:
NOTE: THIS Grading Rubric MAY CHANGE! Stay Tuned.

Assignments:	ES	Peer	Grade Calculation	% of Grade
Pitch1			-	-
Picth2			-	-
#0 Project Analysis	x		-	-
#1 Design Preso	x	x	Avg of ES & Peer	12%
#2 Customer Preso + MVP Design	x	x	Avg of ES & Peer	12%
#3 MVP1 Live demo	x	x	Avg of ES & Peer	12%
#4 MVP1 Result + MVP2 Design	x	x	Avg of ES & Peer	12%
#5 MVP2 Presentation	x	x	Avg of ES & Peer	12%
Company Preso	x	x	Avg of ES & Peer	20%
ES' Subjective Opinion of Class Participation (includes *Peer Reviews* - See Note 1– AND *Speaking in Class* – See Note 6)	x		**See Note1 and Note2 and Note6**	20%
Team Participation		x	Team (see Note3)	Variable
				See Note 4!!

N.B. The above may well change (slightly) during the semester. But this gives you an idea about what is important in the class.

- **Note1**: I keep tally of all the peer reviews that each person does. If you miss a class, you can't really make up missed opportunities for Peer Reviews. **Moral of the story: don't miss class, especially when there are a lot of presentations that require peer reviews.**
- **If you must miss a class due to illness or a job interview or some other goooooooooooood reason, please fill out an EXCUSED absence form –** find it on the ClassWiki. If you miss peer reviews during your absence, those won't be counted against you. See Rule 8.
- **Note2:** "ES' Subjective Opinion of Class Participation" means… do you actively engage in current events? In class discussions? In making the class a better place? Do you take the Peer Reviews seriously, e.g., do you do them religiously? Do you write reasonable comments?
  - o **N.B. Your grade can change as much as a letter grade because of a low Peer Review grade – and MY SUBJECTIVE opinion … so** *participate, participate, participate.* -
  - o **Suggestion:**
    - ▪ **make sure I learn your name.**
    - ▪ **make sure I learn your name.**
    - ▪ **make sure I learn your name.**
  - o **Got it? Good!**
- **Note3:** If someone on the team is slacking – and the team reports it – then the slacker will lose points, while the other team members will get a good grade. We will talk about this grade category over the semester and work out something equitable.
- **Note4:** In order to get an A (A-, A, A+) **your app MUST be published somewhere – on an app store, on a website – somewhere. I will request proof of publication, e.g., a screen capture of the website, a letter from Apple saying they are considering your app, etc.**
- **Note5:** Attendance at Discussion Section on Friday is MANDATORY. Friday is just another class day.
- **Note6:**

Class Participation: REQUIRED –
- ## I will call on individuals to speak.
- ## I will call on individuals to speak.
- ## I will call on individuals to speak.
- ## I will call on individuals to speak.
- ## I will call on individuals to speak.

- If you are not prepared to speak – then say so rather than fumbling about and making stuff up.
- I will track who speaks in the class; speaking in class impacts your participation grade.

Interpretation of Grades

A+ Perfect. Has that WOW factor

A Engineering work is outstanding. Creativity and novelty are clearly observable. The project presents the best possible accomplishments given the difficulty level, and experience level of the student team. The amount of effort invested is substantial

B Engineering work is very good but falls short in a few areas. Traces of creativity and novelty are observable. Project draws upon advanced coverage of coursework yet no noteworthy extension of knowledge is readily observable. There are potential (but not necessarily substantial) improvements to the project accomplishments and the end product. The amount of effort invested is noteworthy but could be increased.

C Engineering work is minimally acceptable. Design fails to materialize through a refined process. Questionable design decisions are noted. Design rationale is not well-documented or simply not credible or not sound from a technical perspective. The project is below expectations with respect to a number of criteria; however it does score some successes which suggest project for the future. Students appear to be minimally prepared to undertake such endeavors unless significant refinement is implemented.

D Engineering work is questionable. Most deliverables are substandard. The project draws upon shallow and limited knowledge base. Given the difficulty level, accomplishments are minor although promising in certain aspects. There is potential that a fully functional prototype could be delivered if additional time is allotted.

E Project could not possibly be classified in any of the above categories

Translation of numeric grades to letter grades (this may change!):

97	100	A+
93	96	A
90	92	A-
87	89	B+
83	86	B
80	82	B-

Required Books: - I will send out digital versions of these books
- **Mythical-Man Month, Fred Brooks, Anniversary Edition**
- **Crossing the Chasm, Geoffrey Moore, 3rd Edition**

Comments Student Evaluations from 441winter2015:

Reprinted below are comments from the 16 of the 60 students who took the time to fill out the Student Evaluation Form at the end of the winter 2015 semester. I wanted you to see their comments; while some of the comments criticize my teaching style and competence, I feel that most of the criticisms are just "failed expectations" – the students thought the course was about being taught a programming language and it isn't. I have added ES RESPONSES to provide my perspective on a few of the comments. I have copied ALL the written comments. I did correct the grammar and spelling. <smiley face goes here> The first one really did come from a student. <another smiley face?>

- Soloway is energetic and fun.
- The professor was often ill prepared and not organized at all.
  ES Response: The best athletes make it look effortless; while it might look like I am "ill prepared" I actually spend a great deal of time reading the literature, talking to relevant colleagues, reflecting on my own entrepreneurial experiences, and preparing to use those materials in class.
- We never received any technical help.
  ES RESPONSE: Technical assistance will be provided by the IAs – though for the most part, you are own your own. As seniors in CSE you should be able to resolve technical issues. On the other hand feel free to ask me about issues of entrepreneurship, presentation style, etc.
- I would have enjoyed learning a mobile language in class. The professor did not teach any programming stills. It was more technical communication, presentation skills, current events, and business forecasting.
  ES RESPONSE: In this course, I will NOT be "teaching a programming language." You are seniors and the expectation is that if you need to learn a programming language, you will pick it up on your own. Indeed the student's list of course topics – "technical communication, presentation skills, current events, and business forecasting" – is quite accurate!
- This class is fails to teach crucial technical skills related to mobile app dev.
  ES RESPONSE: see response, above, please.
- Disappointing. The course heavily focuses on entrepreneurial topics to the detriment of producing better coding habits.
  ES RESPONSE: see response, above, please.
- Lectures seemed repetitive at times.
  ES RESPONSE: hey… only at times…. Not bad. (Sorry for being flippant. Well, I'm not really sorry.)
- It was fun, but disorganized. I was told I was to give my company report repeatedly, and I prepared, but it was pushed back almost every time. I ended up reporting about a month and a half away from my assigned date.
  ES RESPONSE: Guilty as charged! The class changes from week to week depending on lots of factors: what you students are doing and need extra time on, what is going on in the world of technology, what is going on in the world! I will try to keep the company presentation schedule more … well, on schedule.
- **This should not be an EECS class, it is more of an entrepreneur class.**
  ES RESPONSE: Please read the FULL title of the course; thank you.
- I really enjoyed this class. I felt like I learned a lot about what my career can hold as a CSE major. I feel like I can go into the job market and make it into what I want to do.
- Soloway's feedback was actually pretty constructive, but he's not very good at delivering it. I had to speak to the IAs to understand what I had actually done wrong and how I could improve
- Instructor gave negative criticism often which scared students from presenting and attempting to experiment, explore their passions and be innovative.
  ES RESPONSE: this comment is probably the most difficult one to respond to. I try very hard to not be sarcastic in my answers; I hate it when someone does that to me when I am asking a genuine question – so I try hard to not be sarcastic. Please, if you feel that I have am being negative or sarcastic, please tell me… or tell an IA who will tell me. I try very hard to create a fun and productive class atmosphere.
- Also, the professor was often gone and had to conduct class from Videochat.
  ES RESPONSE: Yes, I travel and will *sometimes* – I think "often" is an exaggeration - conduct classes where students are presenting using Skype.